



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,240	04/05/2000	Eiji Suematsu	0033-0651P	6236

7590 05/05/2005

Birch Stewart Kolasch & Birch LLP
P O Box 747
Falls Church, VA 22040-0747

EXAMINER

SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
----------	--------------

2614

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/521,240

Applicant(s)

SUEMATSU ET AL

Examiner

Annan Q Shang

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-52 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1-3, 5-37, 43-50 and 52 is/are allowed.
6) ☒ Claim(s) 38-42 and 51 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02-07-05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/01/04 have been fully considered but they are not persuasive.

With respect to claims 38-39 rejected under 35 U.S.C. 102(b) as being anticipated by **Tanishima (5,953,045)**, applicant argues that "Tanishima cable 71, however, only supplies an output video signal to a television receiver 61 (see column 6, lines 32 to 36; Fig. 5; column 9, lines 17 to 23), i.e., one one-way signal capability. The television receiver 61 does not transmit a control signal to the cable 71 connector..."

In response Examiner disagrees. Tanishima teaches that video channel selection type radio reception apparatus (V-CH-SEL), is connected to a Television Receiver (which includes a tuner to receive channel selections and tune to selected channels) by a cable, i.e., cable 71 (see fig. 9 and col. 9, lines 12-23 and col.12, lines 32-39). Figure 9 clearly shows where the channel selections are received via the tuner of the television receiver and transmitted via cable 71 to the V-CH-SEL. Furthermore, Tanishima further states "...since the video channel selection type radio reception apparatus on the subscriber side transmits a video signal from an antenna to a television receiver, it is not necessary to connect the video channel selection type radio reception apparatus and the television receiver by a cable," Hence, Examiner maintains the rejection of claims 38-39 using Tanishima, is proper and maintained, since Tanishima meets the claimed limitations.

With respect to amended claims 40-42 and 51, the amended to the independent claims necessitated the new ground(s) of rejection discussed below. This office action is made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 38-39, are rejected under 35 U.S.C. 102(b) as being anticipated by **Tanishima (5,953,045)**.

As to claim 38, note the **Tanishima** reference figures 1, 5 and 9, discloses Video Channel Selection Type Radio Reception Apparatus and further discloses an electronic apparatus capable of utilizing an output signal from a millimeter wave receiver, comprising:

the claimed “a connector connected with said millimeter wave....” is met by Cable 71 (figs. 5, 9, col. 2, lines 61-66, col. 6, lines 34-36 and col. 7, lines 40-45), note that Video Channel Selection Type Radio Reception Apparatus (VCSRRec) 51 is a millimeter wave transceiver connected by Cable 71 “a connector” to Television Receiver (TVR) 61 “an electronic apparatus”, and transmits/receives 60 GHz

Art Unit: 2614

signals, where TVR 61 includes "a control signal transmission circuit" which transmits channel selection signals "control signal indicating information" of TVR 61 to Cable 71 (col. 5, line 67-col. 6, line 10, lines 34-36 and col. 9, lines 13-39).

As to claim 39, note the **Tanishima** reference figures 1, 5 and 9, discloses Video Channel Selection Type Radio Reception Apparatus and further discloses an electronic apparatus capable of utilizing an output signal from a millimeter wave receiver, comprising:

the claimed "a connector connected with said millimeter wave...." is met by Cable 71 (figs. 5, 9, col. 2, lines 61-66, col. 6, lines 34-36 and col. 7, lines 40-45), note that Video Channel Selection Type Radio Reception Apparatus (VCSRRec) 51 is a millimeter wave transceiver, connected by Cable 71 "a connector" to Television Receiver (TVR) 61 "an electronic apparatus", and transmits/receives 60 GHz signals;

the claimed "a memory circuit storing information as to whether or not to utilizes the output signal from the millimeter wave receiver..." is inherent to TVR 61 (col. 4, lines 1-10 and col. 9, lines 13-23), note that TVR 61 receives NTSC or PAL video signals and based on the channel selection information, the output signal from VCSRRec 51 is store at TVR 61 which enables TVR 61 to determine the form of signal to display and further includes "a control signal transmission circuit" which transmits channel selection signals "control signal indicating information" of TVR 61 to Cable 71 (col. 5, line 67-col. 6, line 10, lines 34-36 and col. 9, lines 13-39).

4. Claims 40 and 51, are rejected under 35 U.S.C. 102(b) as being anticipated by **Seong (5,200,826)**.

As to claim 40, note the **Seong** reference figure 2, discloses TV signal receiving double conversion television tuner system having automatic gain control provisions and further disclose an electronic apparatus having a function of receiving television broadcasting including terrestrial waves, comprising:

the claimed "a millimeter wave receiving circuit receiving millimeter waves, obtained by up-converting a plurality of broadcasting waves...." and "a broadcasting wave demodulation circuit..." are met by First Converter 20 (fig. 2 and col. 3, lines 10-24), which up-converts a plurality of broadcast waves output from Control filter 21/PLL 10/AGC 22/RF Amplifier 23/AGC 24 "a millimeter wave transmitter" and Mixer 26/PLL 10/IF 27 "a broadcast wave demodulating circuit" down-converting to GHz "millimeter wave" signal to the frequency band of the broadcasting waves (col. 3, lines 25-43);

the claimed "an inverse frequency arranger receiving output signals of the broadcasting wave demodulation circuit..." is met by Second Converter 40 (col. 3, lines 10-24, line 45-col. 4, line 1+), "an inverse frequency arranger," which receives output signals of Mixer 26/PLL 10/IF 27 and changes the frequency arrangement of the output signal to, $f_c \pm 4$ GHz, of the Mixer 26/PLL 10/IF 27; and

the claimed "a transmission circuit transmitting a control signal for controlling the millimeter wave transmitter" is met PLL 10 (col. 3, lines 25-43 and col. 4, lines 23-53), which generates predetermined frequency "control signals" to control the GHz transmitter.

As to claim 51, Seong further discloses where the TV signal receiving circuit includes Second Converter 40, "an inverse frequency arranger," which converts the terrestrial waves from IF band of the broadcasting waves to the original band of the terrestrial waves (col. 3, lines 10-24, line 45-col. 4, line 1+).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 41-42, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seong (5,200,826)** in view of **Beasley (5,321,736)**.

As to claims 41 and 42, note the **Seong** reference figure 2, discloses TV signal receiving double conversion television tuner system having automatic gain control provisions and further disclose a repeater connected to an antenna receiving broadcasting for making relay to a terminal, comprising:

the claimed "a millimeter wave receiving circuit receiving millimeter waves, obtained by up-converting a plurality of broadcasting waves...." and "a broadcasting wave demodulation circuit..." are met by First Converter 20 (fig. 2 and col. 3, lines 10-24), which up-converts a plurality of broadcast waves output from Control filter 21/PLL 10/AGC 22/RF Amplifier 23/AGC 24 "a millimeter wave transmitter" and Mixer 26/PLL

Art Unit: 2614

10/IF 27 "a broadcast wave demodulating circuit" down-converting to GHz "millimeter wave" signal to the frequency band of the broadcasting waves (col. 3, lines 25-43);

the claimed "a frequency arranger receiving the broadcasting signals output from the broadcasting wave input circuit..." is met by Second Converter 40 (col. 3, lines 10-24, line 45-col. 4, line 1+), "a frequency arranger," which receives the broadcast signals output from Mixer 26/PLL 10/IF 27 and changes the frequency arrangement of the broadcastings by adjusting, $f_c \pm 4$ GHz, the frequency of at least one of the plurality of broadcast signals relative to at least one other of the plurality of broadcast signals relative to at least one other of the plurality of broadcast signals; and inherently teaches a power supply circuit supplying power to an antenna

Seong, fails to explicitly teach a power receptor circuit receiving driving power of the TV receiver "the repeater" through a connection unit.

However, note **Beasley** reference figures 1 and 2, discloses a distributed RF repeater (RFR) 24 with a Base Station 14 and a Power Supply Unit 18 (col. 2, line 56-col. 3, line 18) where RFR includes DC Power 50 "a power receptor circuit" that receives driving power of RFR 24 from Base Station 14 and a Power Supply Unit 18 through Coaxial Cable 22 "connection unit."

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Beasley into the system of Seong to provide a centralized system which provides broadcast services as well as power supply and control power supply to the various repeaters.

Allowable Subject Matter

6. Claims 1-3, 5-37, 43-50 and 52 allowed.

7. The following is an examiner's statement of reasons for allowance: with respect to independent claims 1, 8, 46, 47 and 48, the prior art of records **Tanishima (5,953,045)** teaches a millimeter wave transmitter and receiver for transmit/receiving broadcasting wave signals and converting it to millimeter wave signals which is transmitted/received indoors. **Macdonald et al (5,835,128)** disclose a wireless television signal distribution system for distributing television signals received from a satellite or other source to a plurality of individual receiving units within one or more multiple dwelling units. However, neither **Tanishima** nor **Macdonald** and any of the cited references teach, or suggest alone or in combination the feature of millimeter wave transmitter/receiver for performing millimeter wave radio transmission indoors and a connection unit connectable receiving broadcasting and a power supply circuit supplying driving power to a millimeter wave transmitter through the connection unit, as recited in combination with other features with respect to independent claims 1, 8, 47 and 48.

With respect to independent claims 12, 37, 43 and 44, neither **Tanishima** nor **Macdonald** and any of the cited references teach, or suggest alone or in combination the feature of a millimeter wave receiver and a connection unit connectable with an antenna having a function of receiving broadcasting and power receptor circuit receiving driving power of the millimeter wave receiver through the connection unit.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dang et al (5,949,472) disclose a method and apparatus for tuning channels for CATV and television applications.

Oto (5,437,051) discloses broadband tuning circuit for receiving multi-channel signals over a broad frequency range.

Onishi et al (4,340,975) microwave mixing circuit and a VHF-UHF tuner having the mixing circuit.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2614


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller** can be reached on **571-272-7353**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.



Annan Q. Shang.



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600